



TITLE:

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CITATION:

TUN, TINT ...[et al]. Dugong in Man Aung Water, Myanmar. Proceedings of the 5th International Symposium on SEASTAR2000 and Asian Bio-logging Science (The 9th SEASTAR2000 workshop) 2010: 63-66

ISSUE DATE:

2010-02

URL:

<http://hdl.handle.net/2433/107334>

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Dugong in Man Aung Water, Myanmar

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ABSTRACT

Dugong is known as *Ye wet* (= Water pig) and *Ye thu ma* (= Mermaid) in Myanmar. Man Aung Island, about 55 miles in circumference, is situated at 18°47.898'N and 93°98.472'E in the Rakhine Coast of western Myanmar. It was known as Cheduba Island as an English name in the past. Dugongs live in shallow, near shore waters of north, east and south-eastern Man Aung. Dugongs are sighted mostly in the raining season. They particularly like *Halophila ovalis* seagrass species. Usually solitary but they could also be found in groups of two to three animals. They love their family, especially their “child”, very much. Fishermen are of the opinion that dugongs make a cough-like sound, “a hoot, a hoot, ...”, in the water. The mating season of dugong occurs in the transitional period between the end of the rainy season and start of the winter. Dugong meat and bones are used as traditional medicine. Dugongs are protected by Law. Accidental mortality in fishing nets is still prevalent. Geographic position and nature attributes around the island prevail the occurrence of dugongs. Man Aung Island definitely deserves to be nominated as a place for focusing future activities on dugong research and conservation in Myanmar.

KEYWORDS: dugong, Man Aung, Rakhine Coast, Myanmar

INTRODUCTION

The dugong is known as *Ye wet* (= Water pig) and *Ye thu ma* (= Mermaid) in Myanmar language. Historical occurrence of dugongs in Myanmar waters was reported by the Rev. S. Benjamin, in 1853 (Mason, 1882). News about arrival of a female dugong at Rangoon (nowadays, known as Yangon) Zoological Garden from the Arakan Coast (nowadays, Rakhine Coast) was reported in 4th. November 1966 issue of the Guardian newspaper. Since then there had been no reports and, furthermore, no dedicated studies on the species had ever been undertaken in Myanmar waters until Tint Tun and Ilangakoon initiated the first dedicated dugong interview survey in Rakhine coastal area in 2005. For the first time in over four decades of information gap, the continued occurrence of the dugong in the waters off the Rakhine coastline in Myanmar was documented in the first phase of the Myanmar dugong project conducted by Tint Tun and Anouk D. Ilangakoon (2006). The dugong interview surveys from 2005 to 2007 indicated that Man Aung island was famous for the occurrence of dugong in the Rakhine coast.

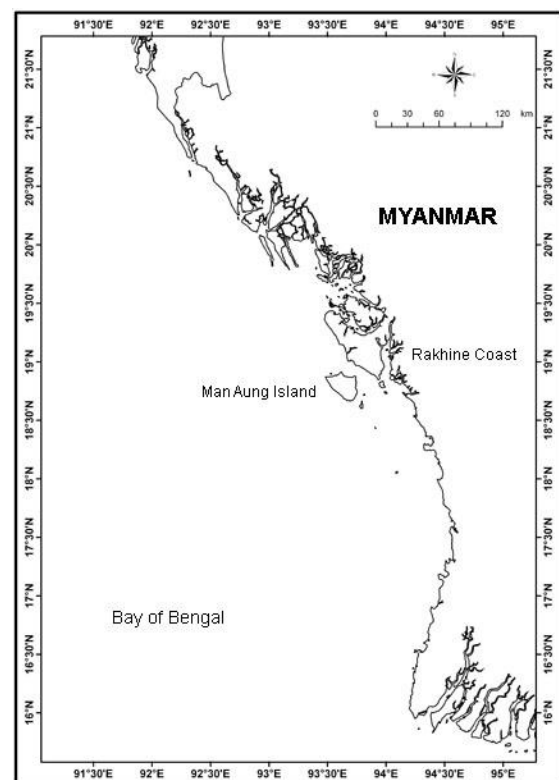


Fig. 1 Map showing the Rakhine coast and Man Aung Island.

MATERIALS AND METHOD

Group discussion and individual interviews with residents of coastal villages and fishermen were held in order to gather information to assess their traditional knowledge regarding the dugong, its historical occurrence, present occurrence, distribution, threats and use in Man Aung area. In conjunction with the interview surveys local fish markets were also checked for the presence of dugong body parts and also for local use of sea grass.

MAN AUNG ISLAND

The Union of Myanmar has a 2270km long coastline and it can be divided into three coastal regions: Rakhine, Ayeyarwady and Mon-Tanintharyi. Rakhine coastal region is located in western Myanmar and Man Aung Island is located at latitude 18°47.898'N and longitude 93°98.472'E west of the Rakhine Coast (Fig. 1 & 2). The Island was known as Phaungtu kyuun and Satupa kyuun in Myanmar and it was known as Cheduba Island as an English name in the past. Man Aung Island is also locally known as May Ga Wady Island and Mainmahla kyuun Island. Man Aung Island is about 55 miles in circumference and Man Aung city is the one and only city on the island. Hmyaw Daw Oo, Zee Taw, Owe Wa, Thit Pone and Thit Wa are famous villages on the Man Aung island. There is a 37m (122 ft) high lighthouse situated in the northeast of Man Aung Island. The lighthouse was previously known as Beacon lighthouse or Letphetkyun lighthouse.

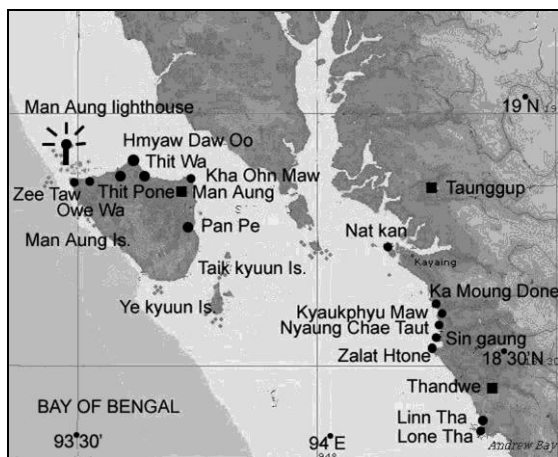


Fig. 2 Map showing the location of Man Aung Island.

OCCURRENCE OF DUGONG IN MAN AUNG WATER

Occurrence of dugong is reported from Man Aung but stranding of the animal has not yet been reported from the Man Aung area. Dugongs live in north, east and south-eastern waters of Man Aung

Island. Usually, they are seen in Ye Kyun Island, Tait Kyun Island, Man Aung lighthouse, Thit Wa village, Thitpone village, Hmyaw Daw Oo village and Pan Hpe village waters (Fig. 2). Dugongs are sighted mostly in the rainy season, but rarely sighted in summer. This indicates that they may move to other areas during the summer months. Two fishermen of about 80 years in age from Zee Taw village reported their finding dugongs more than twenty times during their lifetime.

An attempt was made about four decades ago to display a dugong at the Yangon Zoological Garden. The dugong for this purpose was caught alive from Man Aung waters between Laphetkyun lighthouse (nowadays, known as Man Aung lighthouse) and Kanthaya (nowadays, known as May ga wady beach) in Arakan Coast in 1966. The animal was held near the Pan Pe village temporarily and then sent to Yangon by coastal-run vessel, "Pyi Daw Nyunt". Therefore, the dugong was named "Man Aung Nyunt". Seagrasses were also collected from Man Aung Island water and sent to Yangon to feed the dugong. However, the animal died a few months later at the Zoo.



Fig. 3 Arrival of female dugong to the Yangon Zoological Garden in November 1966. (source: The Guardian, 4 November 1966).

LOCAL KNOWLEDGE ABOUT DUGONG

The interview survey with local fishermen at Man Aung Island provided much local knowledge of dugong. Regarding to habitat, they reported that dugongs live in shallow, near shore waters, around 3 meters depth. Dugongs forage on seagrass beds and they also feed on some bivalves. Respondents stated that dugong particularly likes seagrass with oval shaped leaves and pointed out *Halophila ovalis* when shown some seagrass photographs by the interviewers. It was also reported that the dugong feeds like a pig by poking the sea bottom with its mouth.

An interesting opinion of the respondents is that dugongs make a cough like sound, "a hoot, a hoot, ...", in the water. Respondents said that the dugongs can swim extremely fast and that they are

very strong animals. They reported that dugongs are very alert and have very good hearing. They observed that as soon as some noise was made, the dugong swam away rapidly gaining a large distance within a few seconds.

In Man Aung water, dugongs were reported to be usually solitary but they could also be found in groups of two to three animals “as a family”. Fishermen said that dugongs “love their family”, especially their “child”, very much. They explained that adults (parents) swim around and try to break the net to save juveniles (their child) if the calf is caught in a net. A fisherman also explained how dugongs “love their family” with his following experience. He said that he had once observed two dugongs accidentally caught in his fishing net about twenty years ago and another big dugong was swimming around nervously and tried to damage the net in an attempt to save the two trapped in the net. The fisherman later found that the bigger one in the net was a pregnant female and a baby in her womb weighed about 8kg was found when they dissected the animal. Most fishermen said they know the sex of dugong by checking their reproductive organs.

Local people assume that some parts of dugong can be used as medicine. It was reported that dugong skin and bone are good for diarrhea and dugong blood is a good treatment for warts (*Kwyet No*) because warts can be dislodged easily by applying the dugong’s blood on the wart. This treatment was discovered accidentally by these fishermen when a fisherman with warts cut up a dugong and accidentally stained his wart with the dugong’s blood. Next day, he found his wart was dislodged easily. Some of these people keep dried dugong skin and bones to be used as traditional medicine.

An author from Man Aung Island, Man Aung Mya Aye, wrote a book about marine products of the Island titled “May Ga Wady and Marine Products”, mentioned the dugong and illustrated the cover of the book with a dugong photograph. According to the book, the transitional period between the end of the rainy season and start of the winter, i.e. November and December, is the dugong mating season. The book also mentioned how to cook dugong meat, and the traditional use of dugong meat and bones as medicine. The book mentions that dugong meat is delicious but not good for women who are pregnant because, according to traditional medicinal practices, it is a “cold” category item. The dugong’s tusk has more medicinal strength than its bones. To treat illness, dugong bone is ground on a stone slab with some water. Then a mixture is made by adding some sugar and water and this mixture is drunk as a medicine to treat illnesses (Aye, 2006).

Dugong meat is not an item among the available seafood at restaurants there. However, some peoples said dugong meat had better taste than pork.

THREATS TO DUGONG

Gillnets are the main threat to dugongs in Man Aung waters. Like other marine mammals, accidental killing of dugong in fishing nets has also happened in Man Aung water. The weight of the dugong bycatch has ranged from 33 to 98kg. Fishermen said that dugongs were very strong animals and they could break fishing nets easily in the past because nets were made of cotton yarn unlike the present-day nets made with nylon. Dugongs are usually found to be entangled in the nets by their flukes. Dugongs were purposely killed by some fishermen using a hand harpoon at Man Aung Island in the past, but at present they do not kill them on purpose.

DISCUSSION

Geographic position and natural attributes around the Man Aung Island prevail the occurrence of dugongs in the Man Aung water. Many rocks in the northern area of the Island provide dugongs shelter from rough seas. It also poses a barrier that protects the animal from high fishing intensity and effort.

Occasional sightings and accidental bycatch of small dugongs in Man Aung water indicates breeding and existence of a still viable population in this water. Dugong surveys conducted in more southern parts of the Rakhine coast between Ngwe Saung and Hmawzone area in 2005-2007 also indicated that the area still supports a healthy, breeding dugong population (Tun & Ilankoon, 2006, 2007; Ilankoon & Tun, 2007). Dugongs still inhabit the waters off the Rakhine coast of Myanmar and they are abundant around Man Aung Island. Therefore, these areas are of particular importance for dugong conservation.

Local authorities of Man Aung are aware of the conservation status of their dugongs and do their best to protect them. Fishermen from Man Aung Island have observed a notice from the Department of Fisheries and they are also aware that dugongs are rare and protected by the government. They know that they must release a dugong if they find the animal is alive in the net. However, accidental mortality in fishing nets is still prevalent throughout the area.

Some anatomical parts of the dugong have been used as traditional medicines in some parts of the Rakhine coast and it may be difficult for fishermen to relinquish their traditional medicinal practices. However, due to the active education campaigns and monitoring by the local Department

of Fisheries, no dugong parts were observed at Man Aung market.

These positive factors have paved the way to a favorable situation for further public awareness raising activities, research and conservation efforts on both dugongs and seagrass at Man Aung Island.

Although the dugongs' worldwide range is documented as being spread through the coastal water of some 37 countries in the Indo-Pacific (Marsh *et.al.*, 2002) it is known to be declining in numbers and area of occupation in many parts of this range. Therefore any discoveries of unknown or little known populations in Myanmar are of importance under the present status of the species.

Dugongs are protected by law in Myanmar. The State Law and Order Restoration Council enacted Law No. 6794, titled "The Protection of Wildlife and Protected Areas Law" was dated on 8th. June, 1994. In accordance with the Law, the Forest Department of the Ministry of Forestry of the Union of Myanmar issued a list of Protected Animals on 26 October 1994, Notification No. 583/94, in three categories: Completely Protected, Protected and Seasonally Protected Wild Animals. Dugong, *Dugong dugon*, is listed in the "Completely Protected Animals" category. Furthermore, the Union of Myanmar is the first signatory states of dugong conservation and management plan. Man Aung Island definitely deserves to be nominated as a place for focusing future activities on dugong research and conservation in Myanmar.

ACKNOWLEDGEMENT

We are very grateful to the Society for Marine Mammalogy for providing a grant to go to Man Aung Island. Thanks are due to Mr. Nyi Nyi Lwin (Chairman, Man Aung SPDC), Mr. Aung Htain Linn (Secretary, Man Aung SPDC), Mr. Kyi Win (DoF), Mr. Kyaw Moe Naing (Secretary, USDA), and village authorities of Man Aung Island : Mr. Soe Tin (Hmyaw Daw Oo village, Mr. Aung Ket, (Thitwa village), Mr. Khin Maung Htwe (Myo Thit), Mr. Tun Tin (Pann Hpe village), Mr. Tin Soe (Zee Taw village) for their help during our visit to Man Aung Island.

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